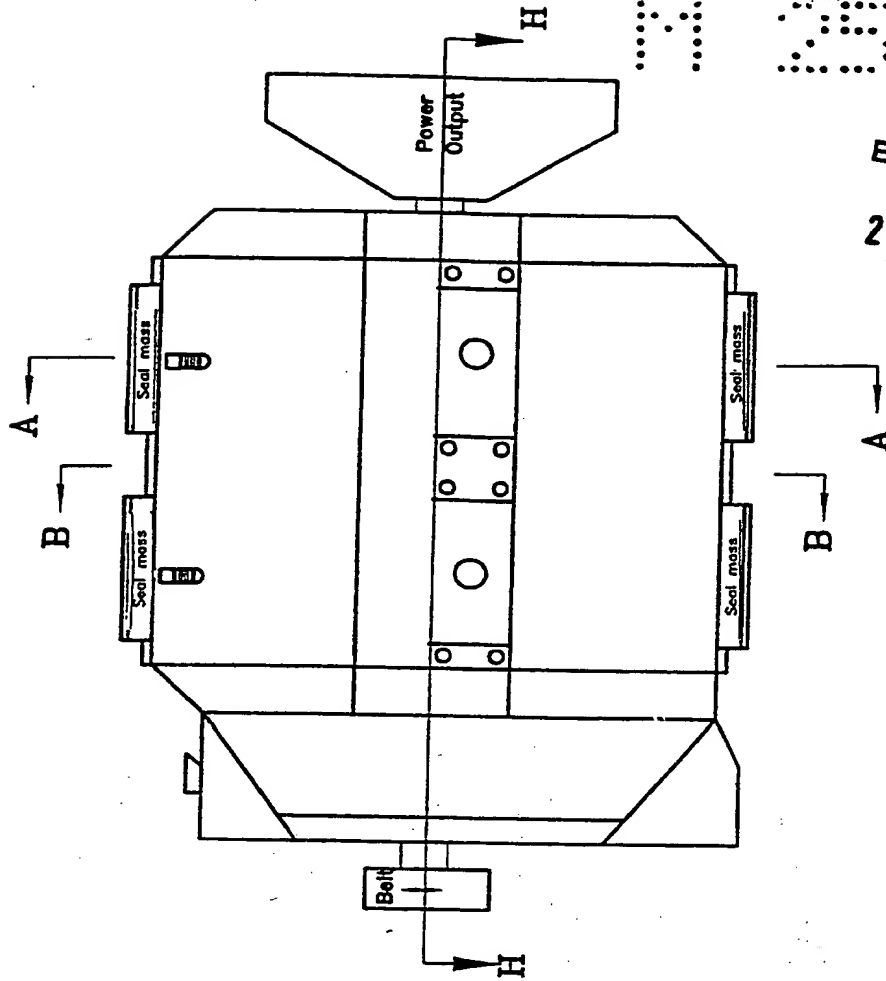


TYPICAL SHAPE - FRONT VIEW

F1.b



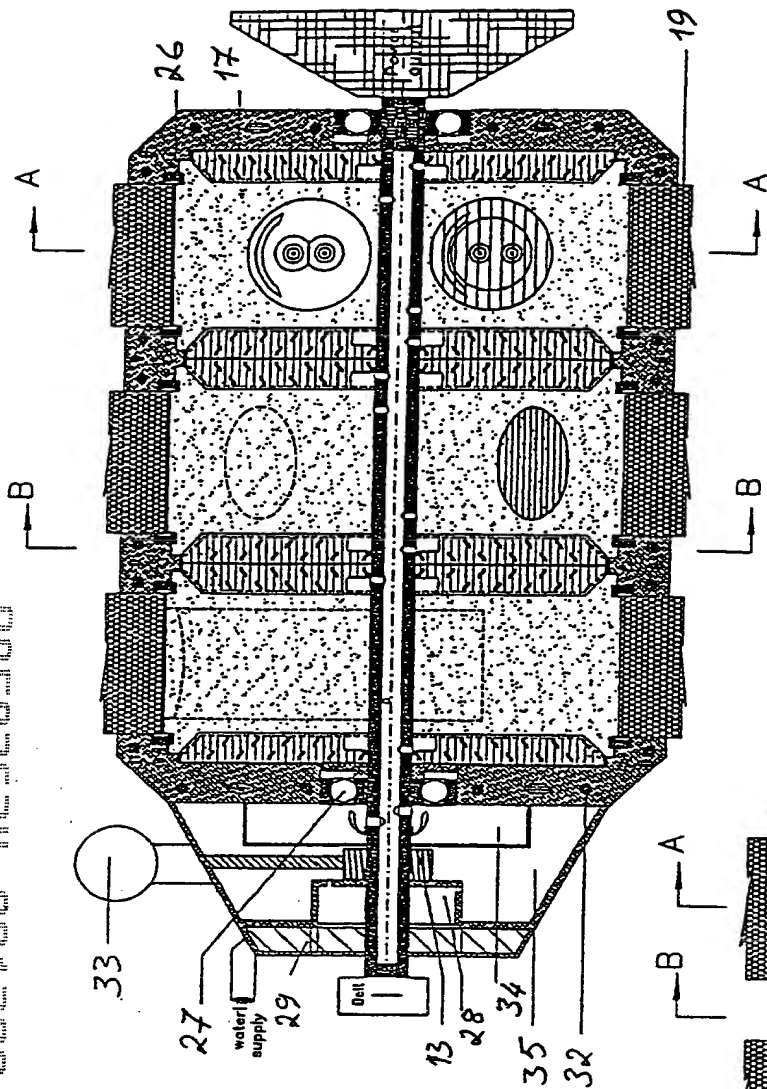
TYPICAL SHAPE - SIDE VIEW

F1.a

00ET160" 14E928560

- 2/25 -

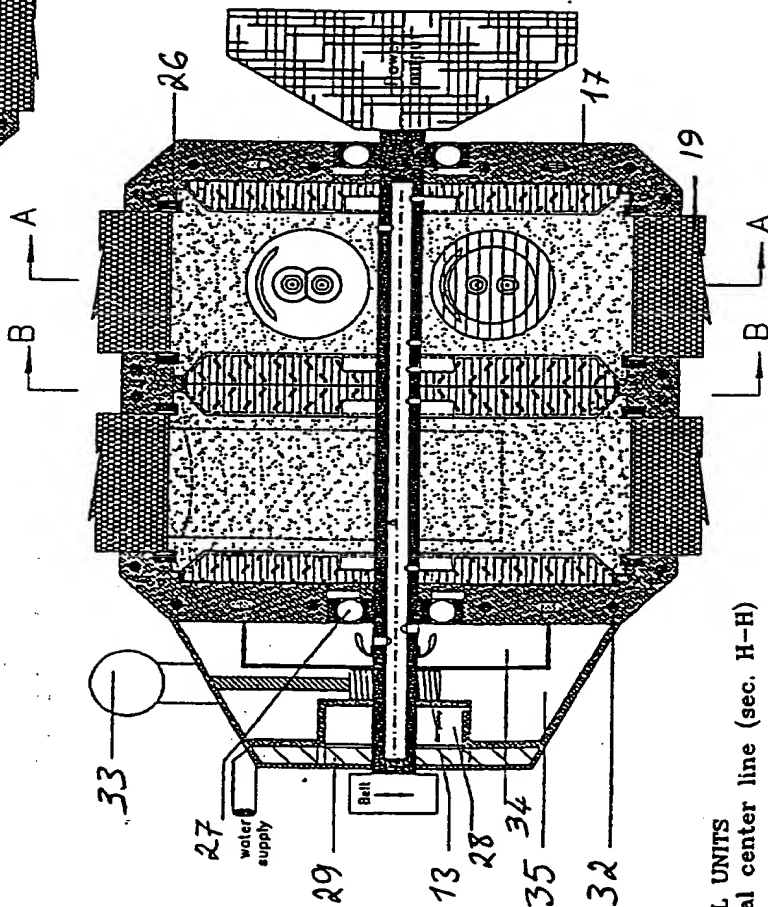
AMENDED SHEET



THREE POWER WHEEL UNITS
Section plan in horizontal center line (sec. H-H)

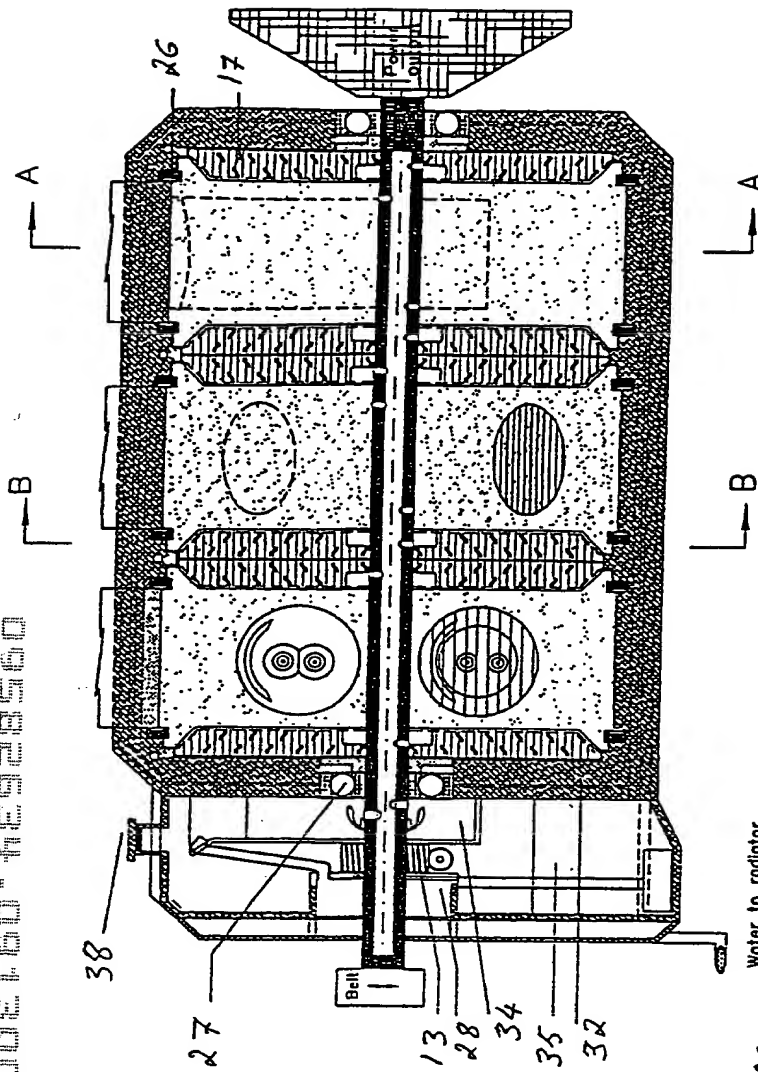
F-2b

Fig-2



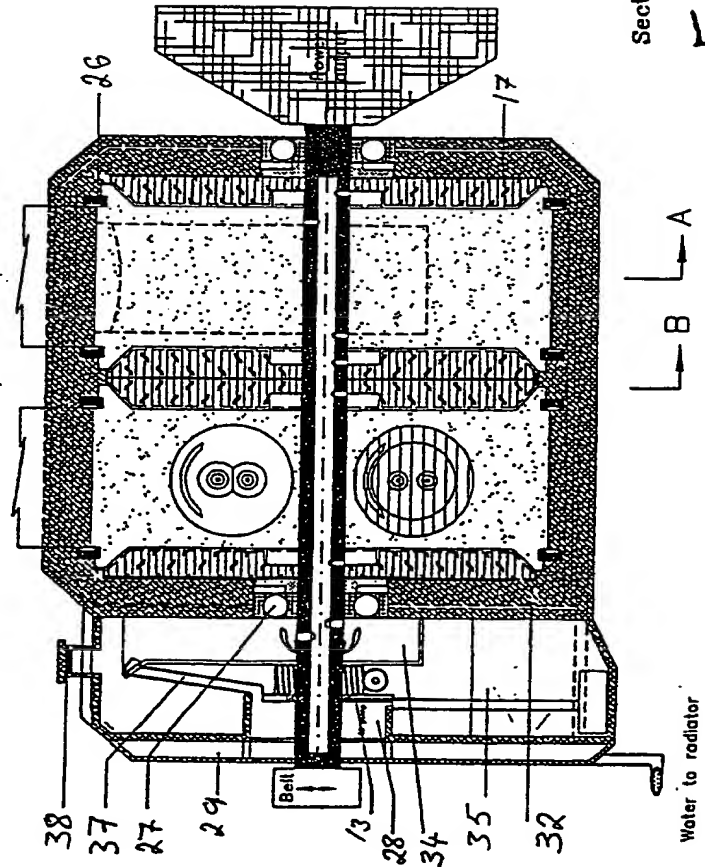
TWO POWER WHEEL UNITS
Section plan in horizontal center line (sec. H-H)

F-2a



THREE POWER WHEEL UNITS
Section plan at vertical center line (sec. V-V)

F-3b

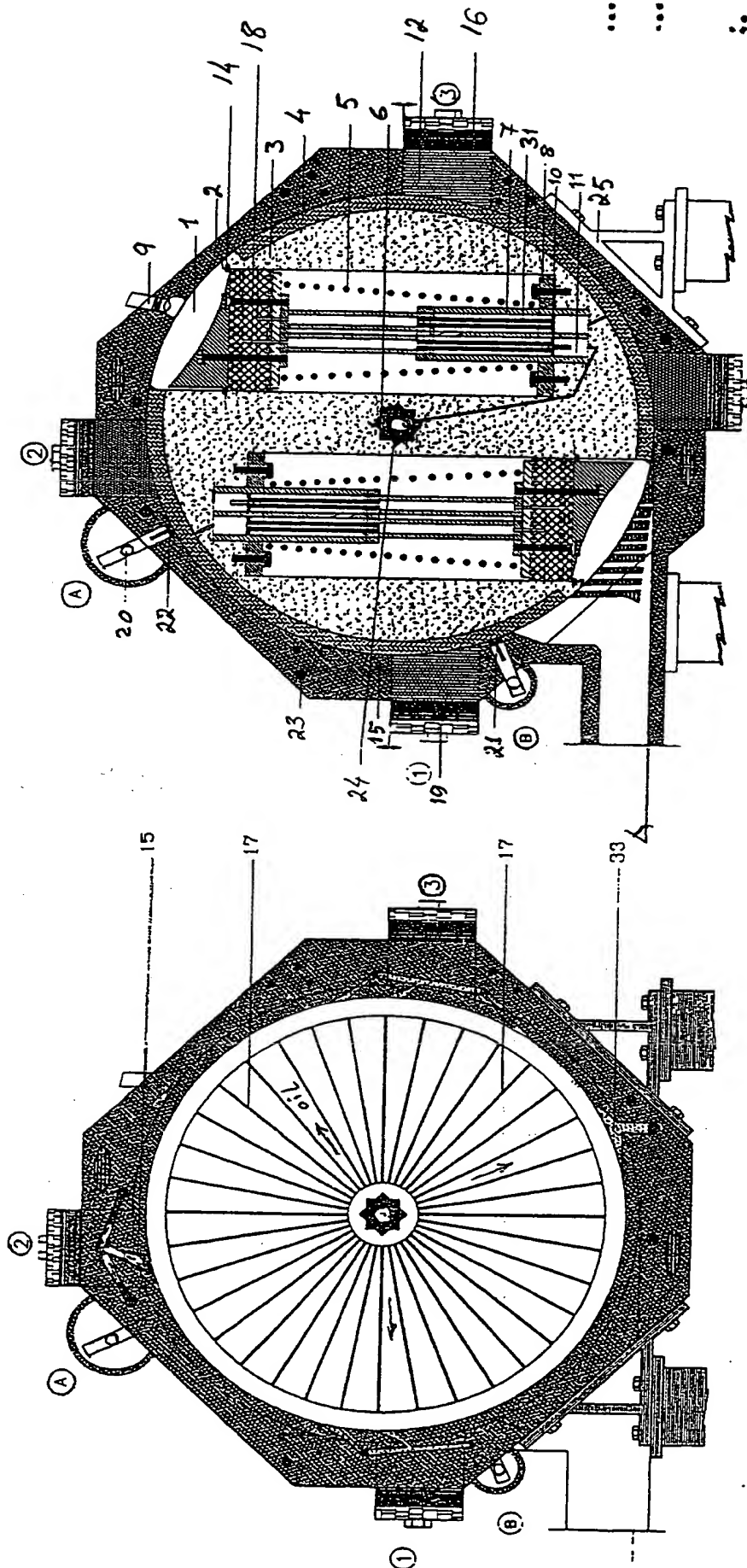


TWO POWER WHEEL UNITS
Section plan at vertical center line (sec. V-V)

F-3a

-Fig-3-

28.09.88



SECTION A - A

F-4a

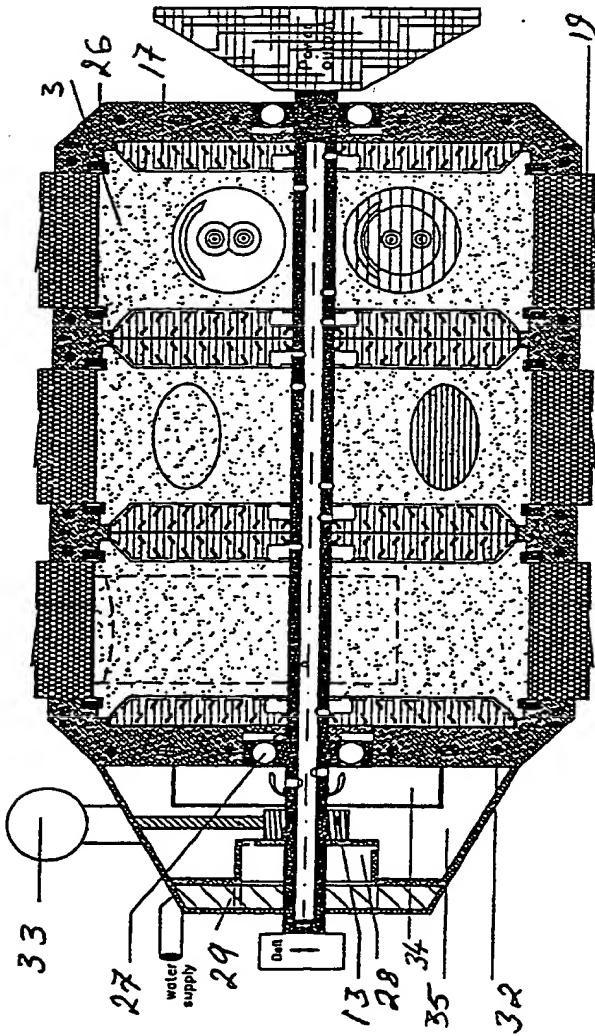
SECTION B - B

F-4b

- Fig-4 -

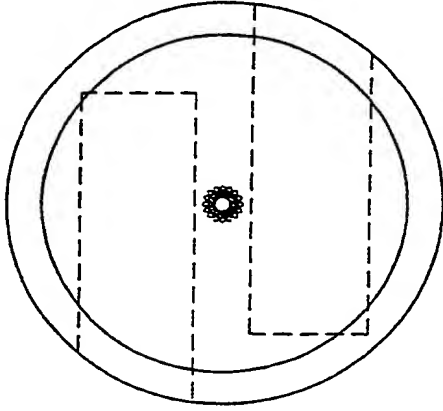
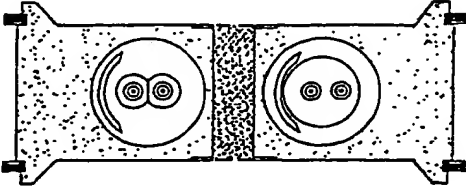
4/15

AMENDED SHEET

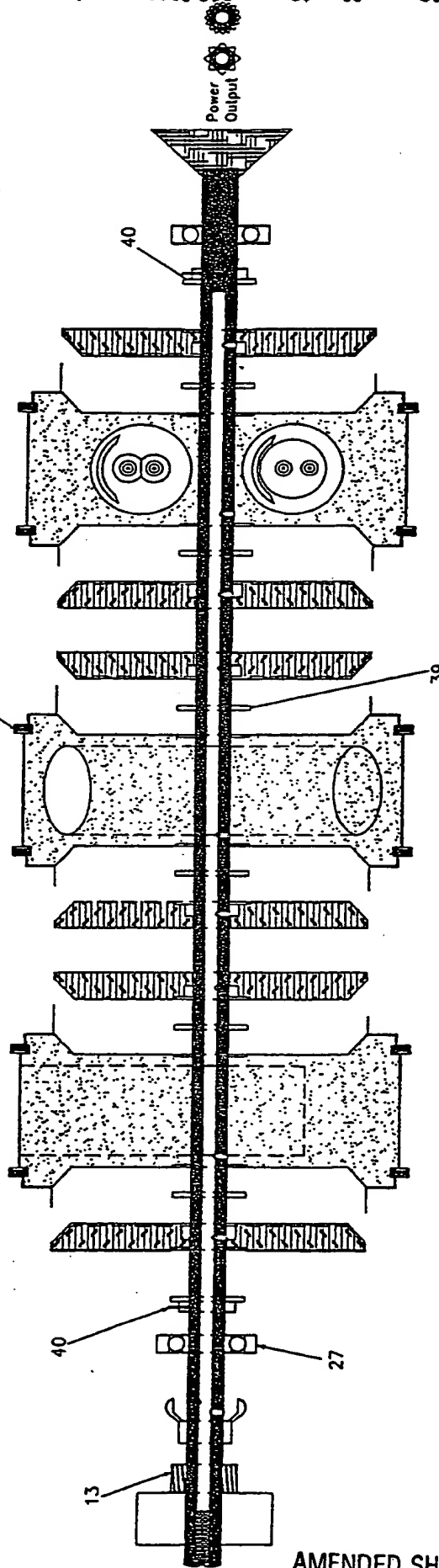


Section - Plan in horizontal C.L.

F-5a



No. 3
F-5b

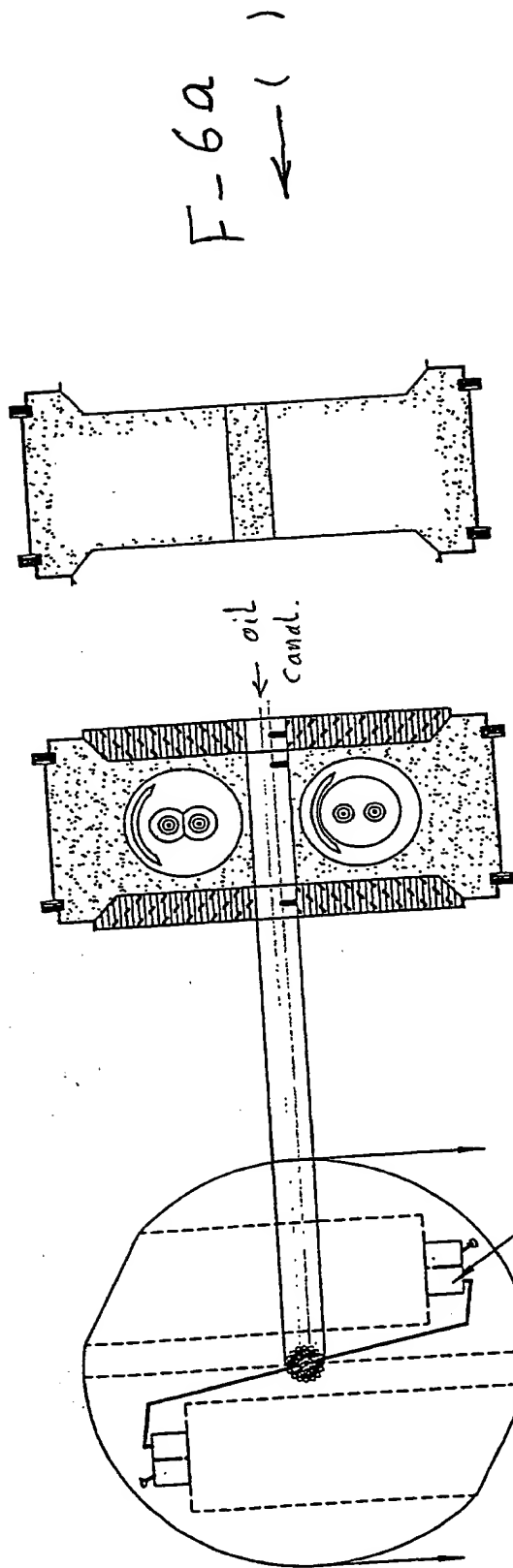


ROTATING PARTS ANALYSIS ON THE CRANK

F-5c

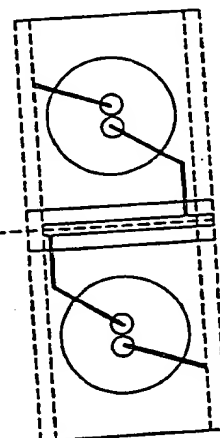
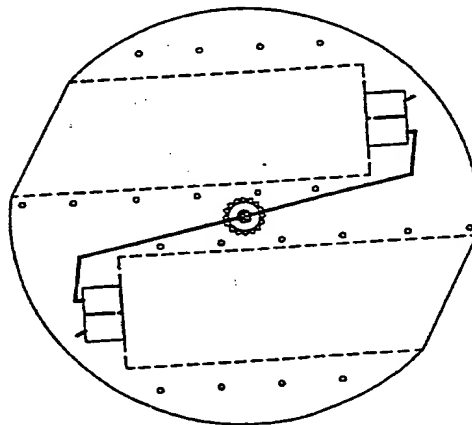
- Fig-5 -

005160" 4E928560



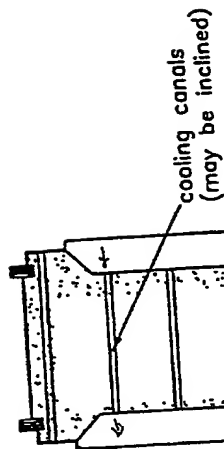
Power wheel unit

Oil sump feeder for piston



PISTON INLET OUTLET OIL SYSTEM

Proposal for additional cooling oil holes in the wheel

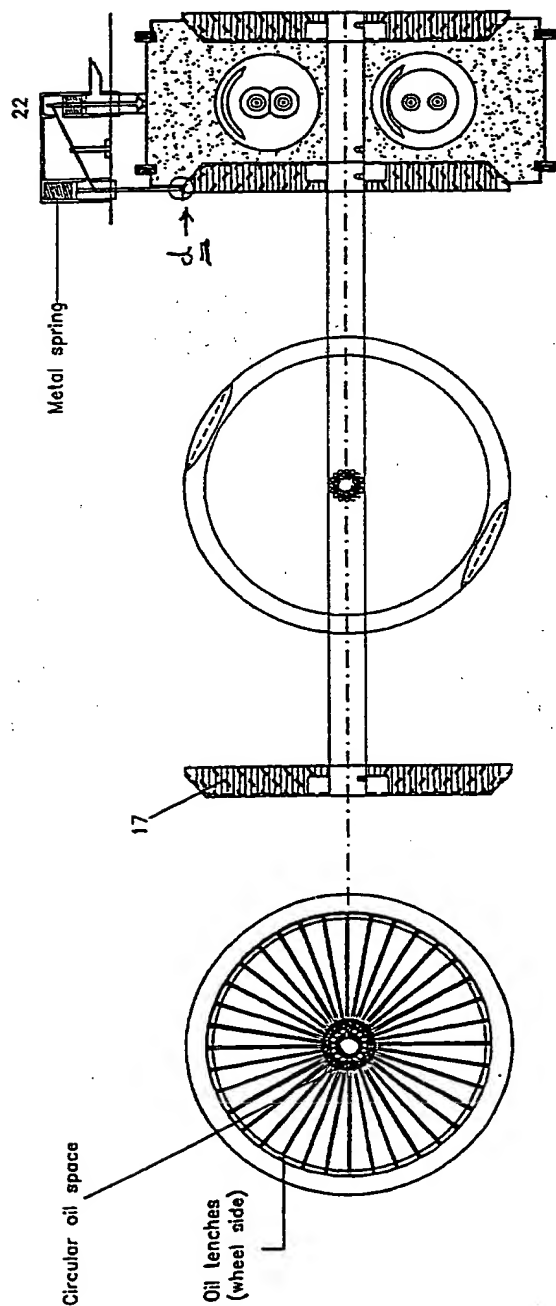


cooling canals
(may be inclined)

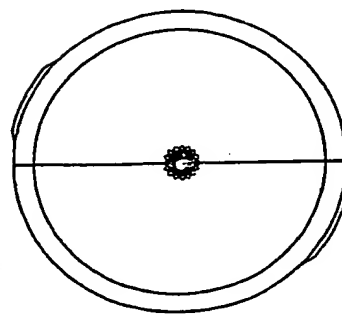
F-6a
← ()

F-6b
← ()

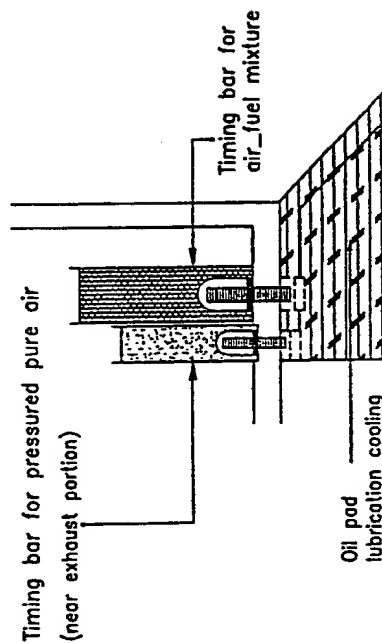
- Fig-6



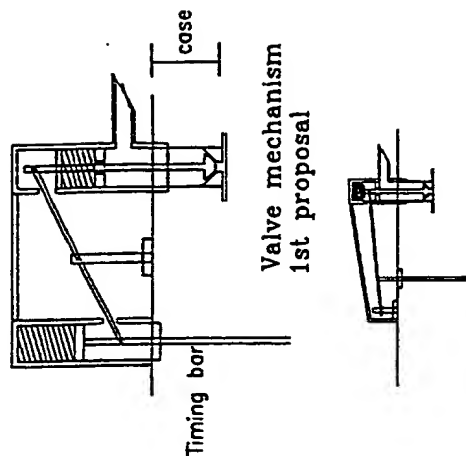
Cooling lubricator pad (Detail 17)



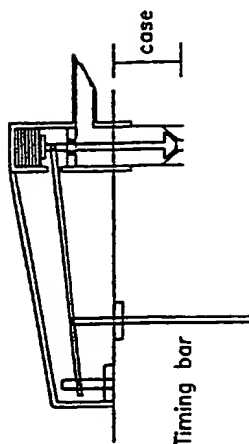
**2nd proposal of timing system
for valve mechanism
(Higher points pad circular edge)**



one pad - two valve timing system -- ϕ_H
(Typical performance)



Valve mechanism
1st proposal



Valve mechanism 2nd proposal

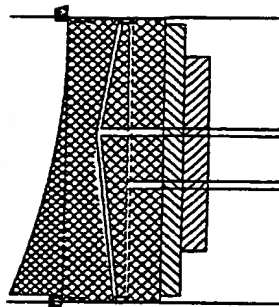
F-7C

Fig. 7

L-7e

7-12

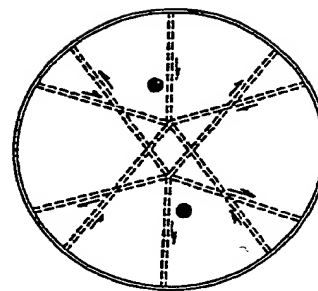
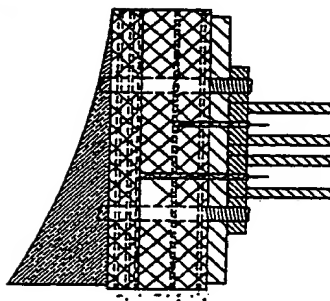
11-09-99



Proposal 2

$$\begin{matrix} 0 \\ \infty \\ L' \end{matrix}$$

8
1
9
1
1




86

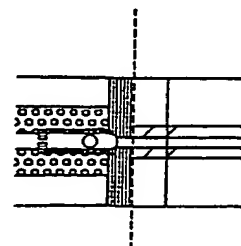
PISTON OIL CANALS DISTRIBUTION
Scale 1 : 1.5



84

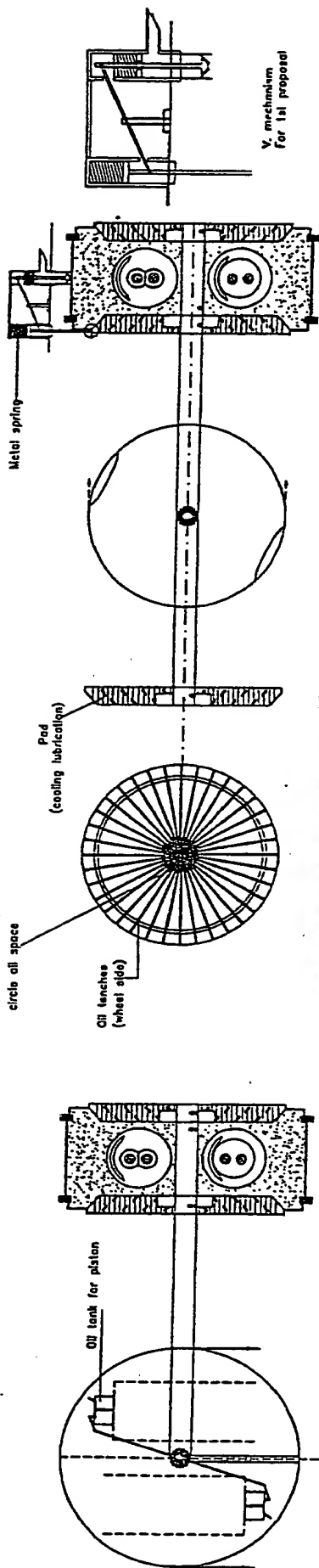
- Solid piston lock ring**
- A cross-sectional diagram of a piston. The piston is shown with a crown on top and a skirt on the bottom. Various components are labeled with boxes containing symbols: a cross for the piston gas seal, a grid for the piston oil seal, a circle with a dot for the piston lubrication seal, and a circle with a horizontal line for the piston oil seal. The piston is shown in a vertical orientation.
- ☒ Piston gas seal
- ☐ Piston oil seal
- ☐ Piston lubrication seal
- ☐ Piston lubrication seal
- ☐ Piston oil seal
- (As particular in piston)

(As particular in piston)



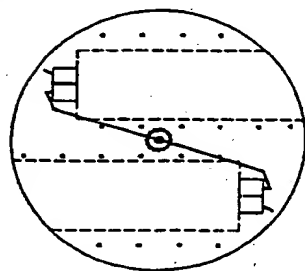
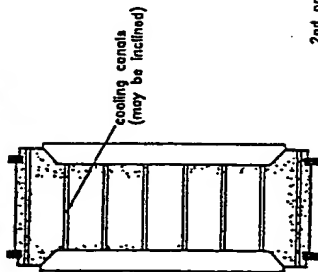
DETAIL 22

Li 88

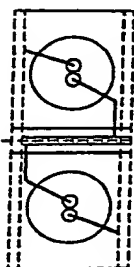


1st proposal of timing system with valve mechanism (lower points pad circular edge)

LUBRICATION COOLING PAD



PISTON INLET OUTLET OIL SYSTEM



2nd proposal of timing system with valve mechanism (higher points pad circular edge)

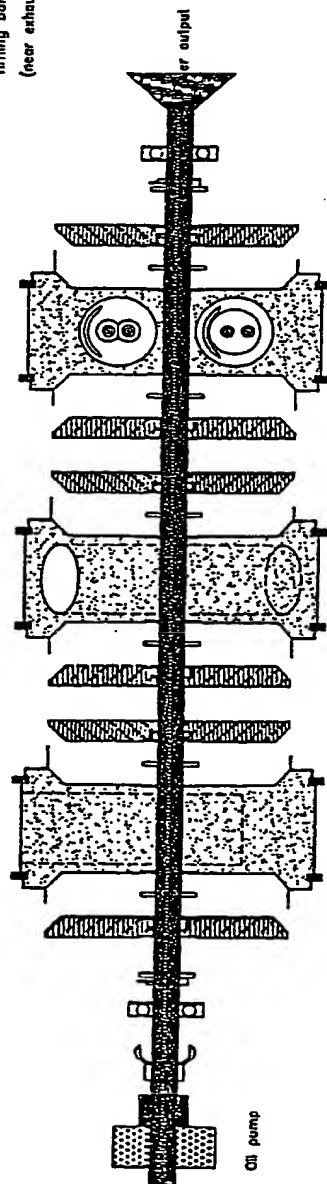
F-9c

V. mechanism for 2nd proposal

F-9a

F-9b

F-9d



(one pad - two valves timing system) (typical performance)

F-9e

NOTE
(Oil inlet hole on shaft as per each part it is not as per scale)

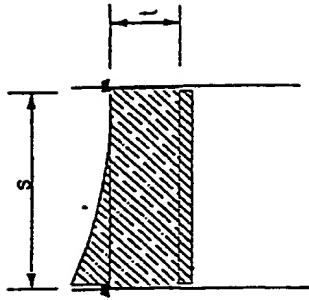
ROTATING PARTS ANALYSIS ON THE CRANK

F-9f

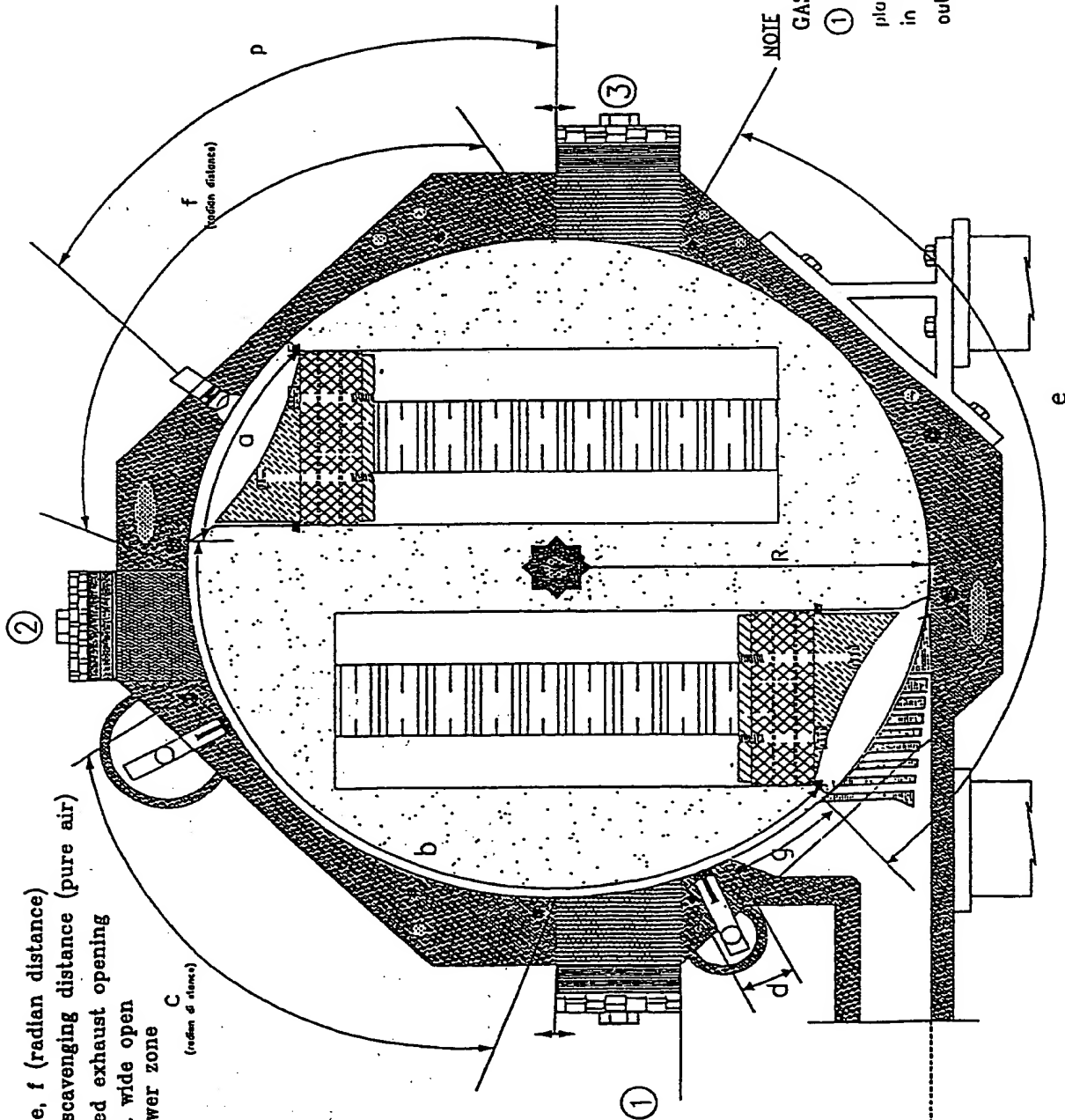
Fig-9 =

b>c
b>f+1/2a
d>a

a, b, c, e, f (radian distance)
d: piston scavenging distance (pure air)
e. is graded exhaust opening
g exhaust wide open
p. fuel power zone



l: hight of piston cop
s: diameter of piston



NOTE

GAS SEAL MASS

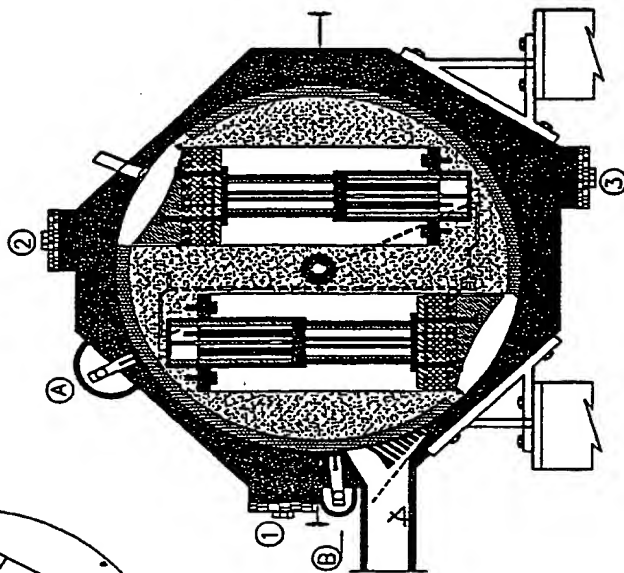
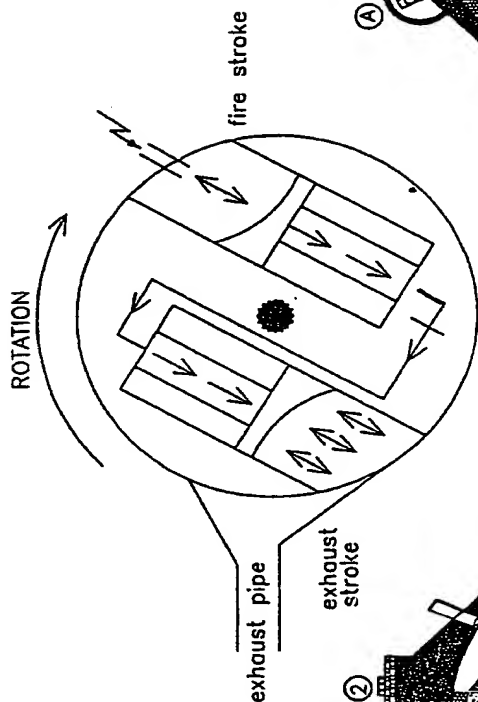
① ② & ③ Can be replaced in different places as required and could be four pieces in suggested places depend on the outlet angle and other criterias.

Fig-10

SECTION A - A

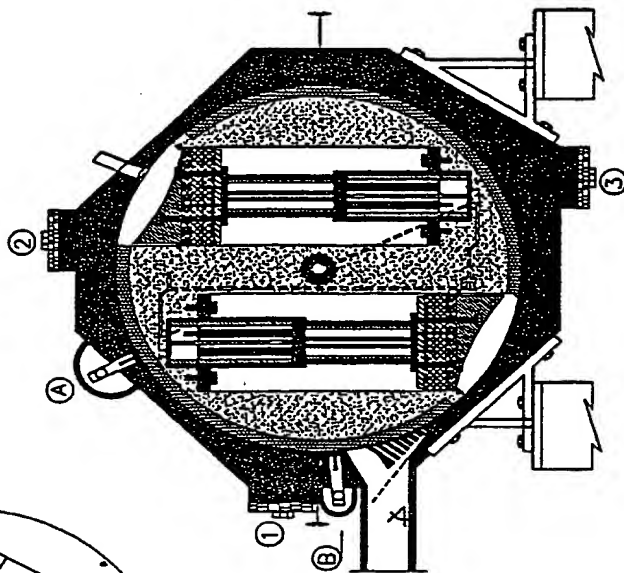
C.H.S. : Connected Hydraulic system Push arm WHEEL

Section of system (typical)
 Combined hydraulic push-arm system
 Compressed air push-arm modified
 or Hydraulic liquid push-arm modified
 (two piston hydraulic connected system)



Proposed: 1

F-12a



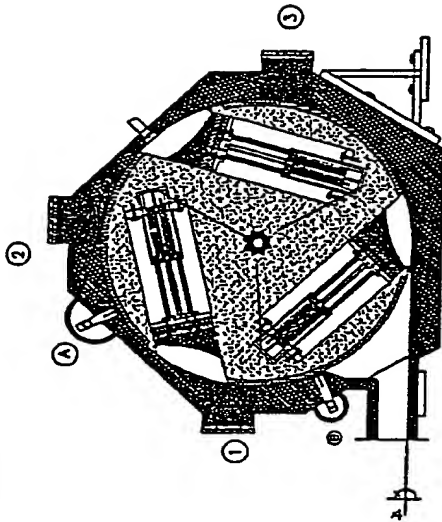
Proposed: 2

F-12b

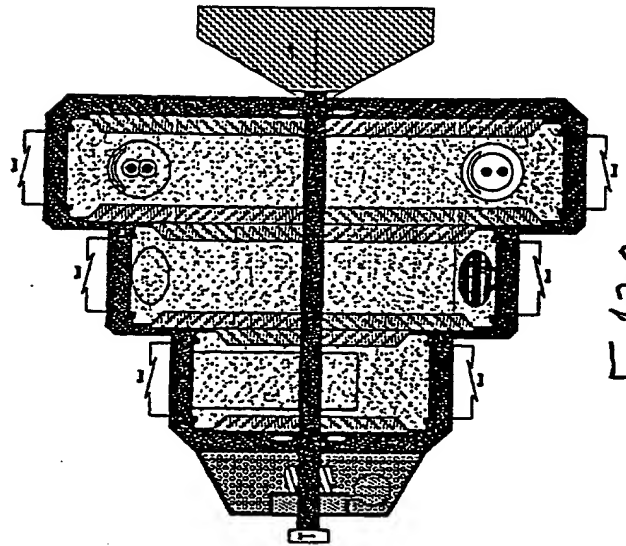
Fig-12

00ET60"4E928560

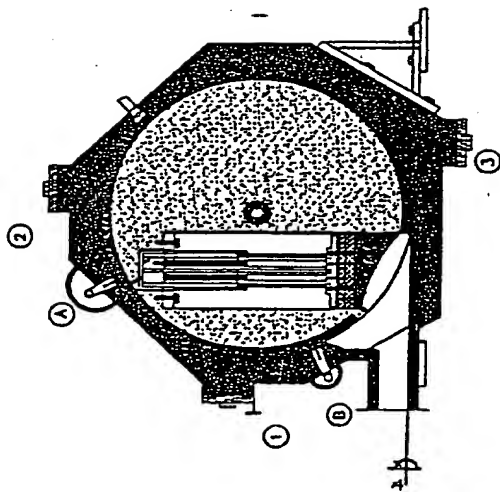
M 25.09.99



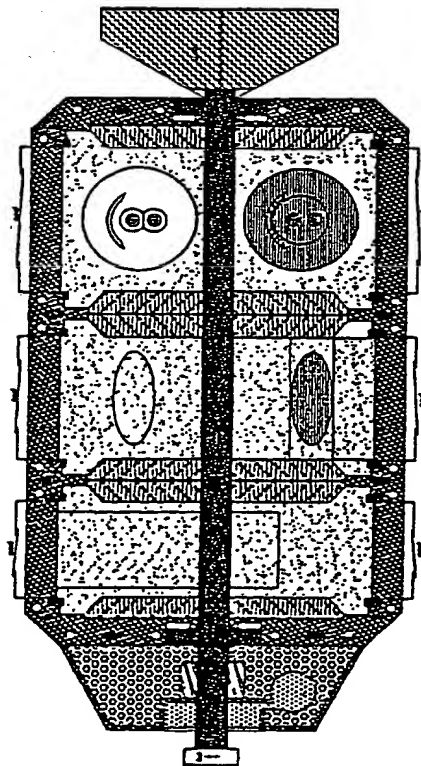
F-13b



F-13c



F-13a



F-13d

Fig-13

Figure 1 consists of 12 diagrams arranged vertically, labeled 1 through 12. Each diagram shows a rectangular domain with a central hole. The diagrams illustrate the evolution of the domain shape and the hole's growth. Diagram 1 shows a rectangle with a central hole. Diagrams 2 through 12 show the hole growing and the rectangle deforming, with various labels indicating dimensions and parameters.



M 25-09-99

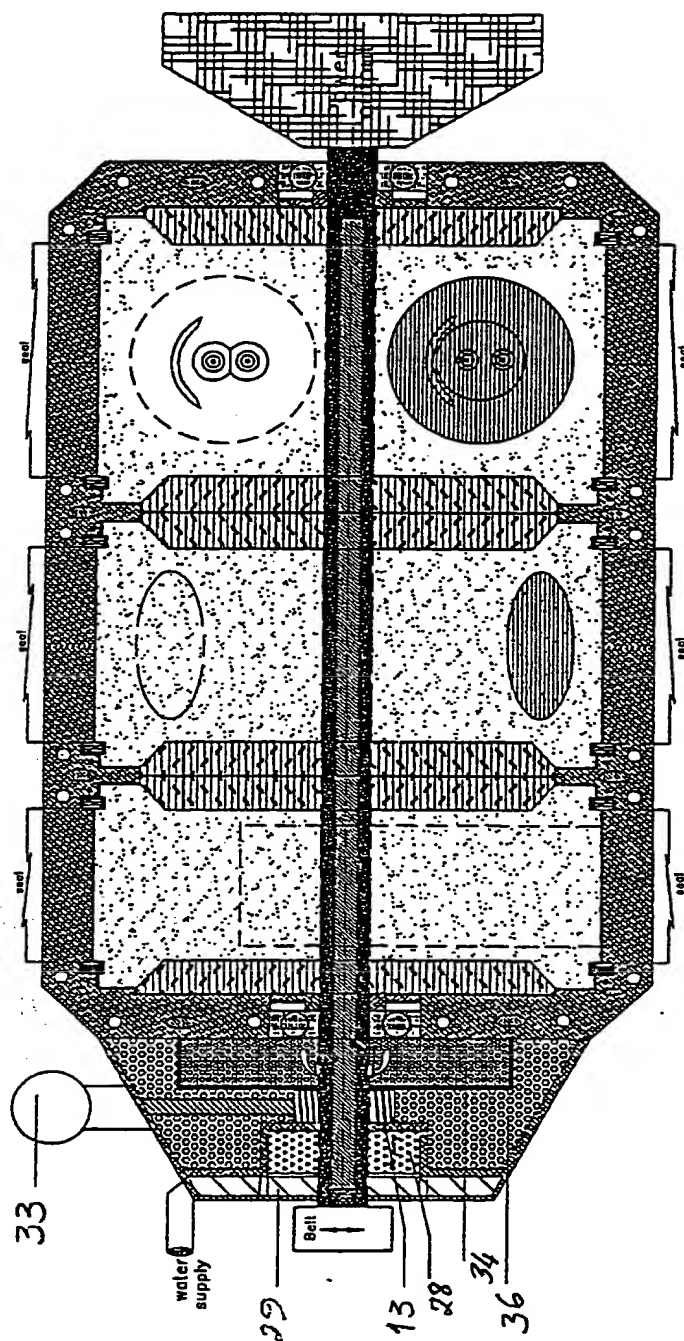


Fig-15

THE UNIVERSITY OF CHICAGO



00E160" 4E928560

N 25.09.99

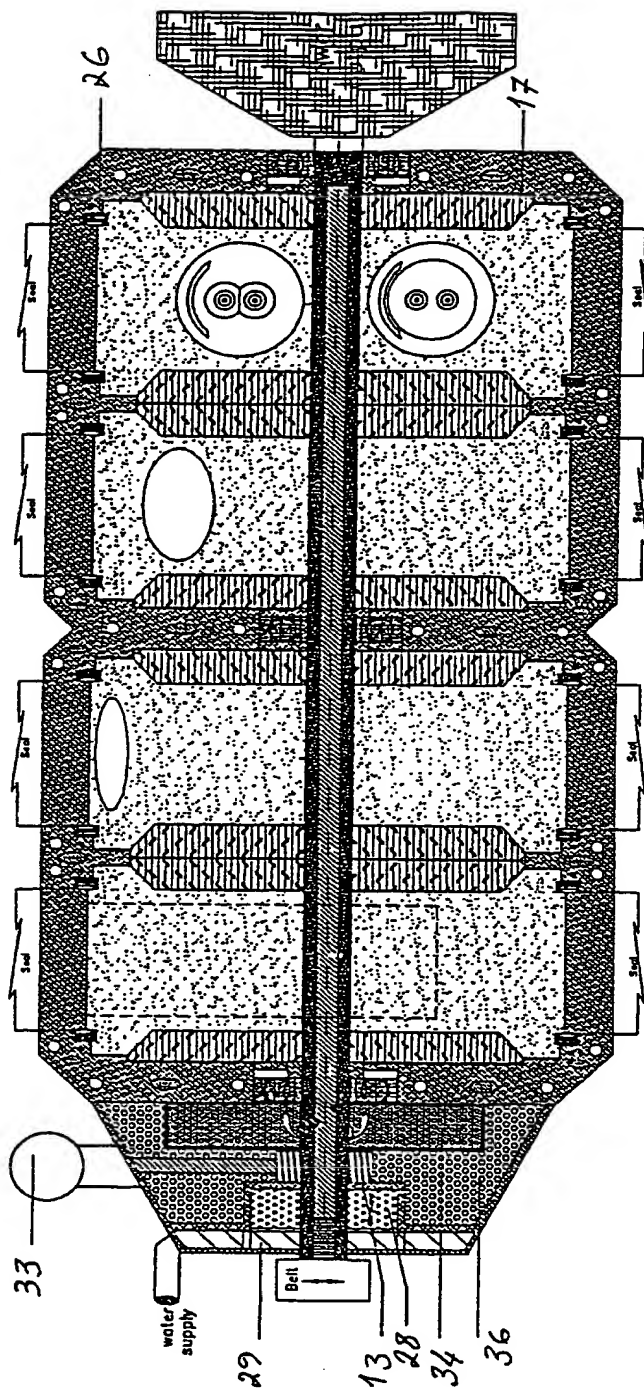
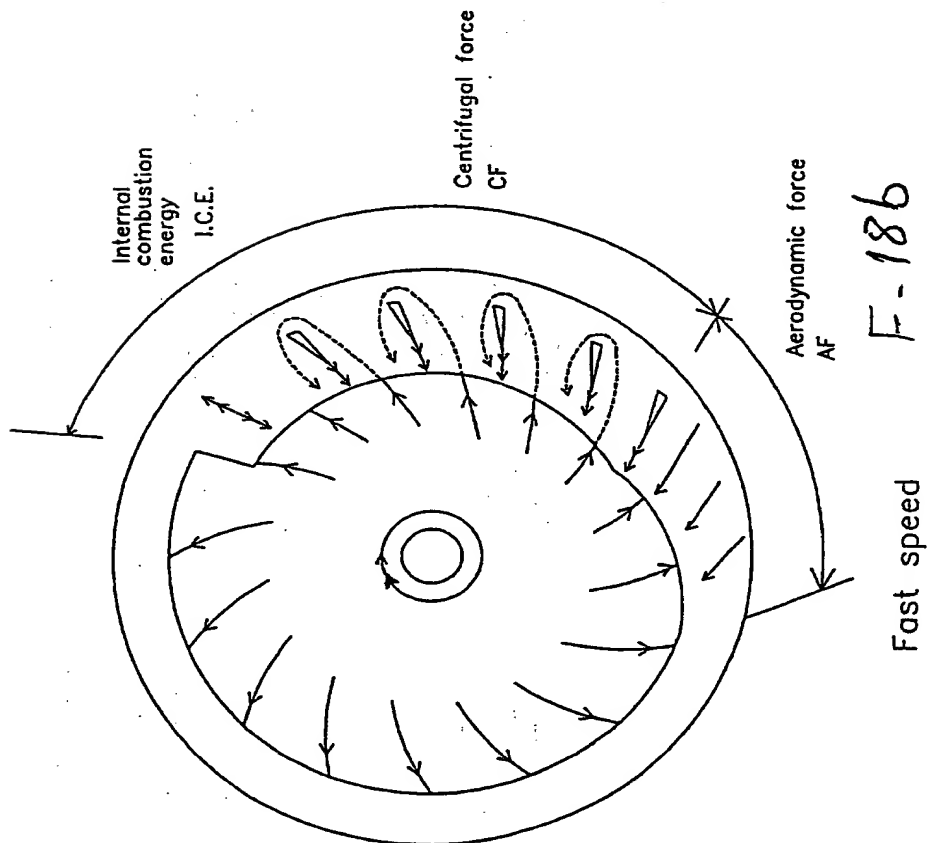
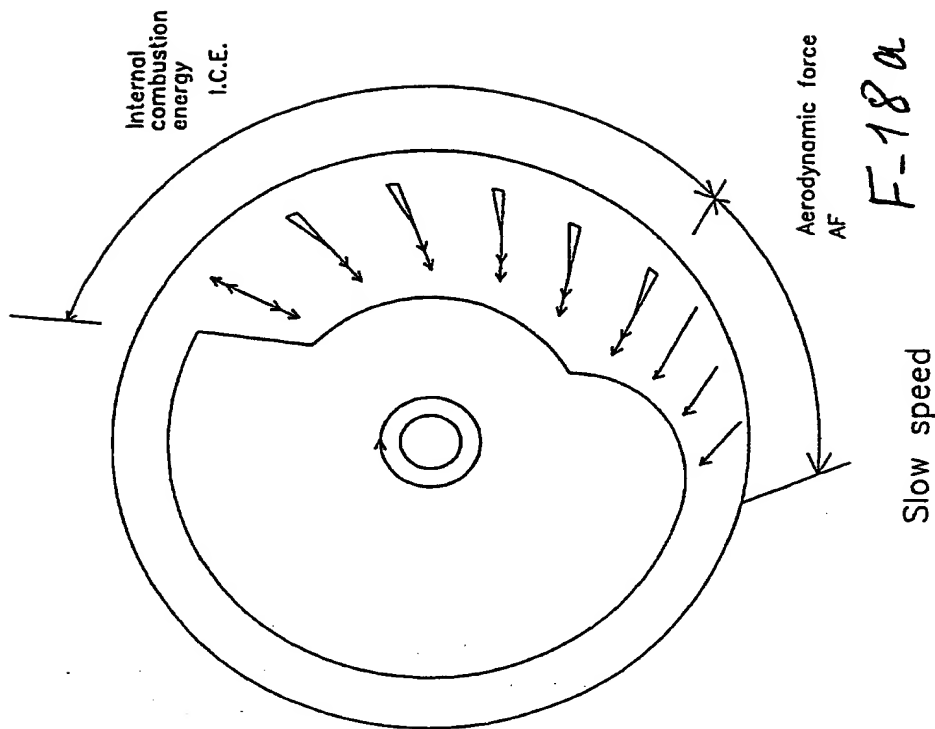


Fig-17

DETAILS OF ENGINE FORCES



$$P = \text{I.C.E.} + \text{A.F.}$$

$$P = \text{I.C.E.} + \text{C.F.} + \text{A.F.}$$

Fig-18

NOTE

Component elements are not in actual scale



SPARK ZONE



19/

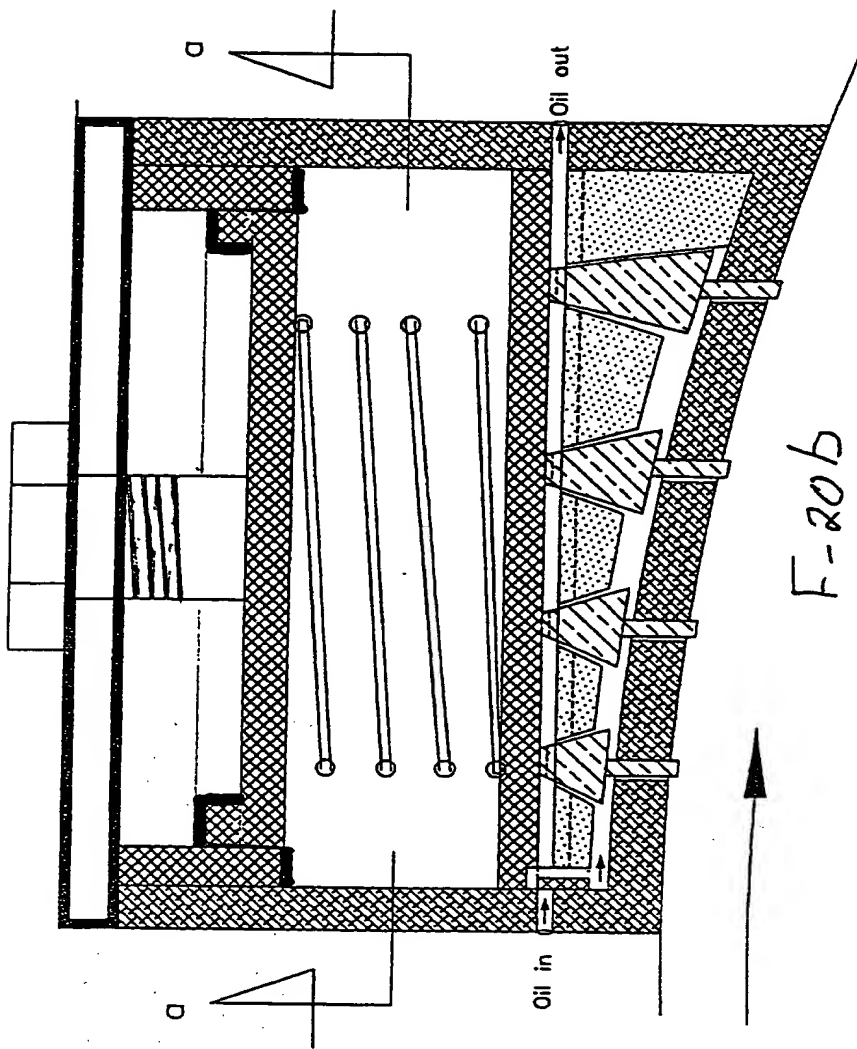
Ignition piston(b)
continue rotation

Fig-19

00ET60"4E928560

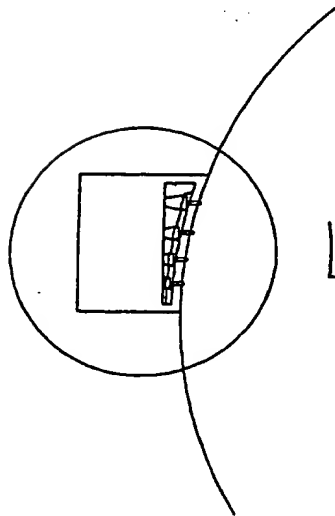
M 25.09.99

Proposal for seal mass

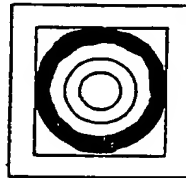


F-20b

Fig-20

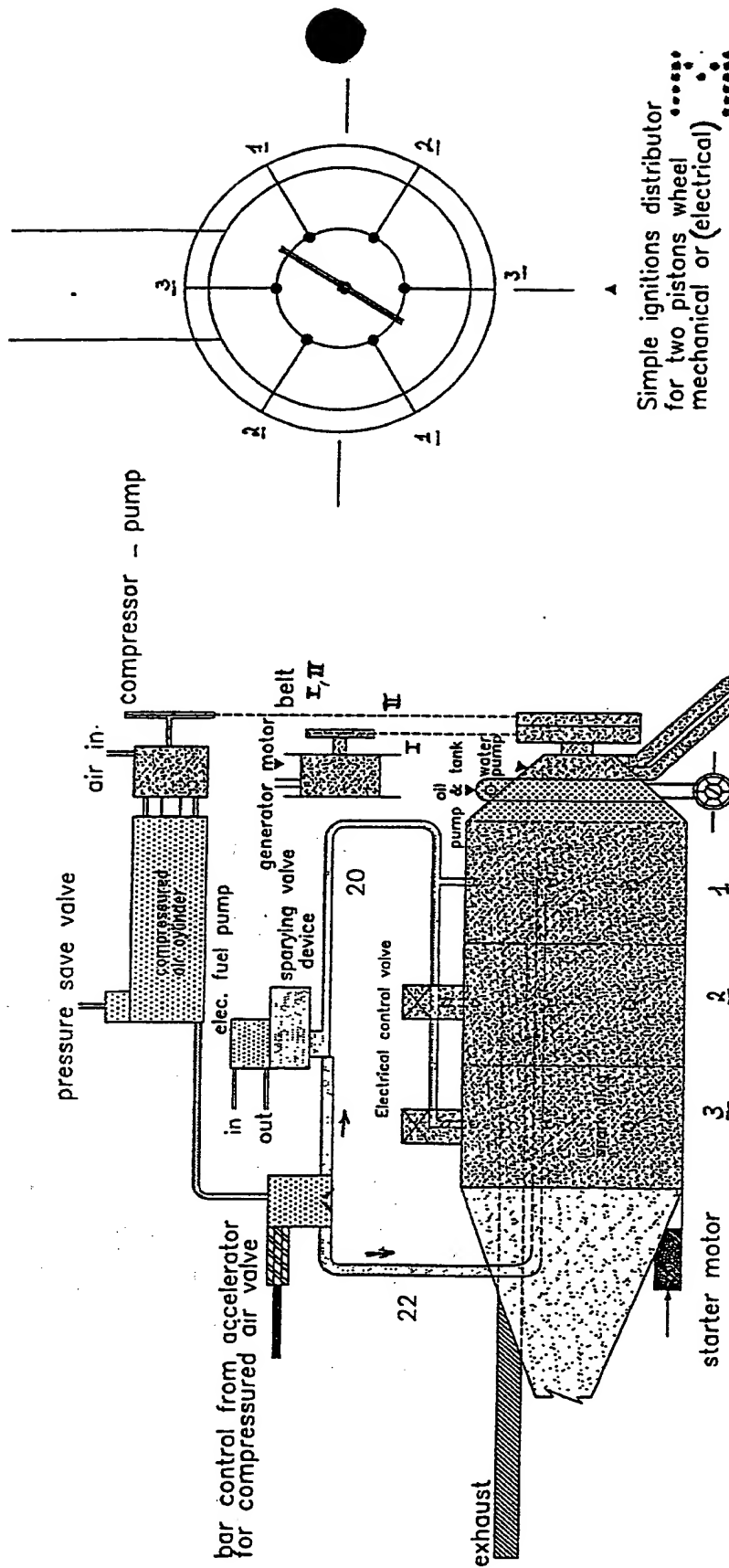


F-20a



Section a - a

F-20c



Proposal No: 1.
Fuel spray injection for:- all - fuel.air-mix inlet

Fig - 21

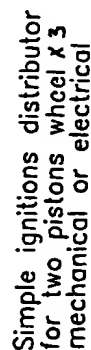
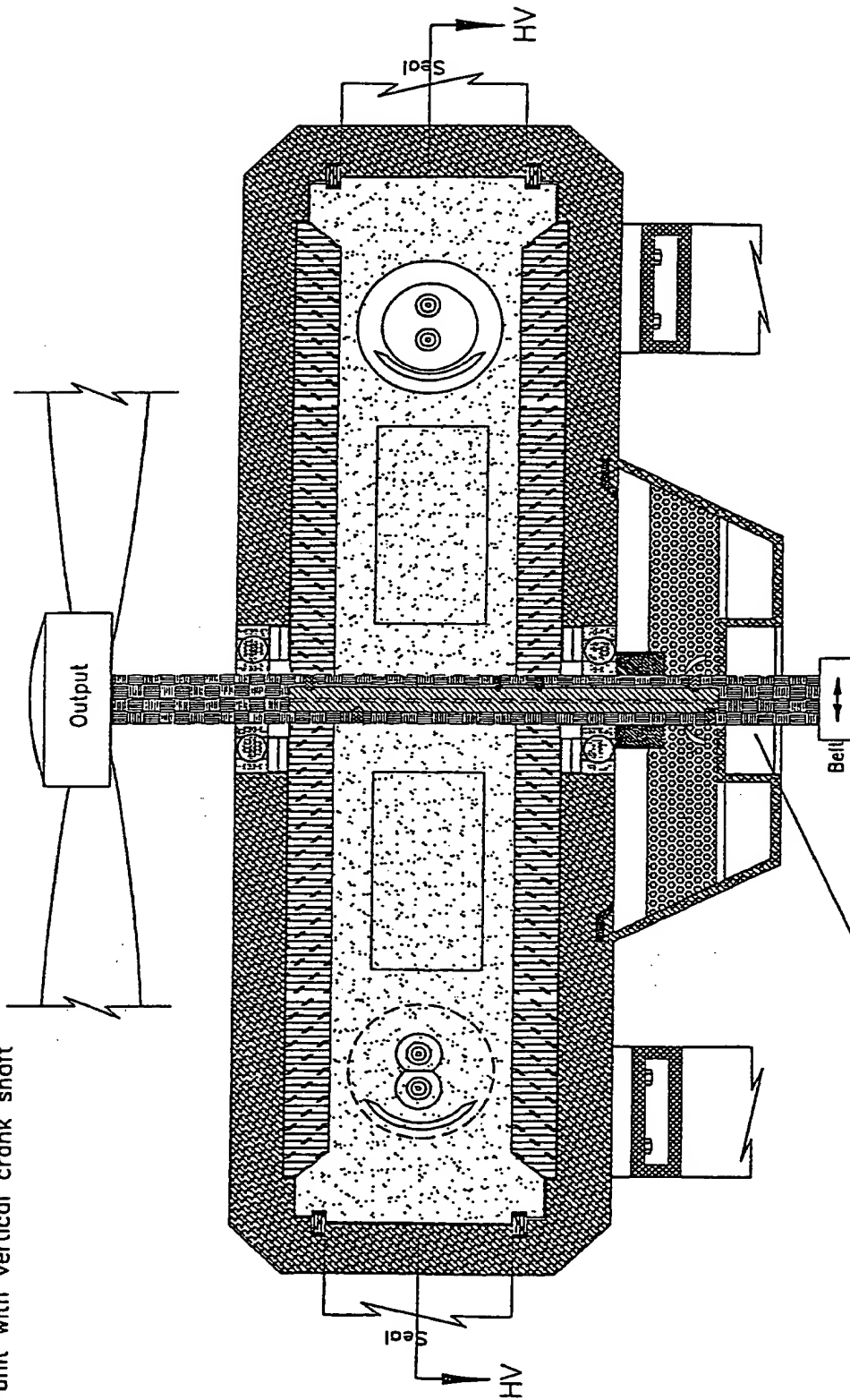


Fig-22

Typical unit with vertical crank shaft



Oil pump not necessary
(Using any oil cooling proposal)

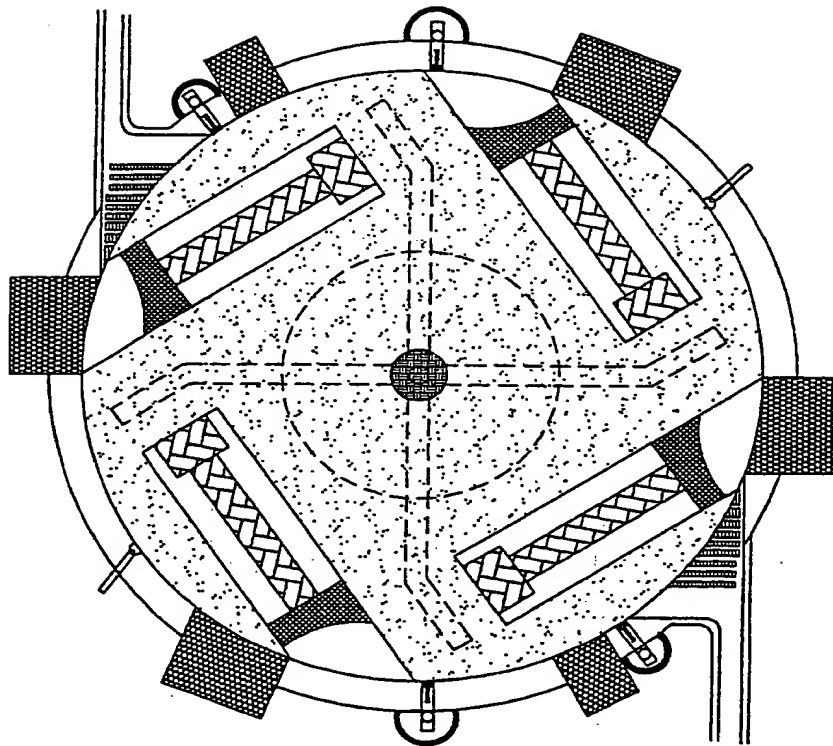
One big power wheel unit
(One big energy unit)

Super Power Wheel Unit
(Dual combustion ignition system or more)
Typical Section in vertical C. L.

Fig-23

000160" 4E928560

Typical unit with four pistons
Using dual ignition system
Section in horizontal C.L.
(for vertical crank shaft)

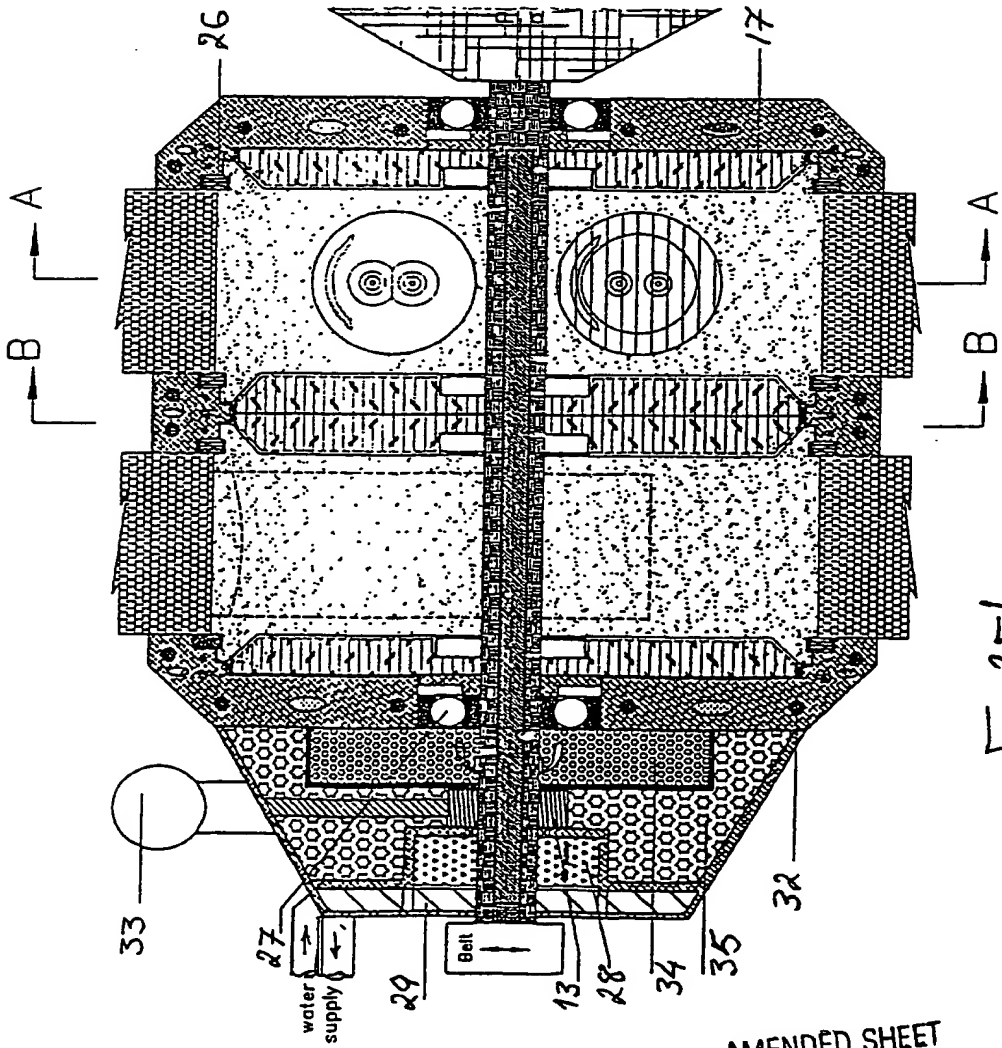


Piston cup curve as specified

section HV - HV
A super Power Wheel Unit
(Dual combustion ignition system)

Fig-24

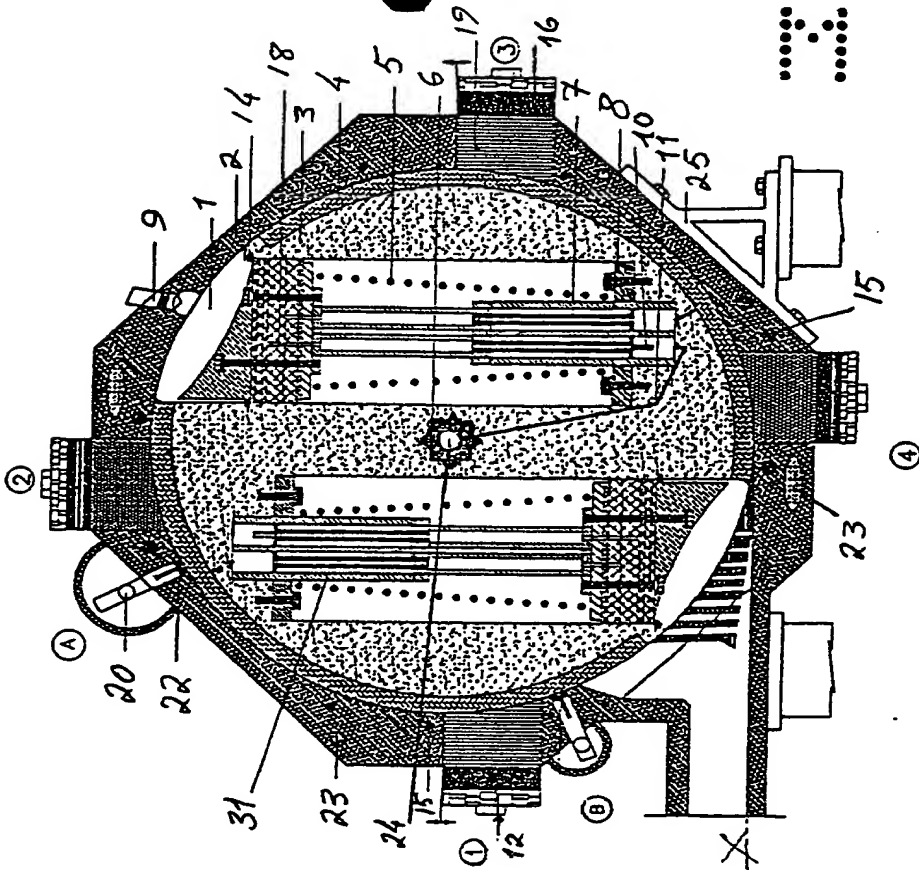
25.09.99



F-25b

TWO POWER WHEEL UNITS
Section plan at horizontal center line (sec. H-H)

scale:
Auto-cad p.



SECTION A - A

Section plan at vertical c. l. of power wheel.
(A typical spring power modified)

F-25a

Fig-25

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